UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,730	07/16/2003	Miska M. Hannuksela	061492-0220	9027

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EXAMINER
SENFI, BEHROOZ M

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 October 2009</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>9-33</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>9-33</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>30 July 2007</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/06/2009 has been entered.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 9-19, 23-24 and 26-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sullivan (US 2003/0156640) in view of Tranchard (US 5,680,483).

        Regarding claim 15, Sullivan discloses, a method of encoding a video sequence

(i.e., figs. 1-3) comprising; encoding into an encoded bit-stream by a video encoder, a

first indication corresponding to an intra coded picture (encoded bit-stream with first

indication, e.g., I picture, indicating intra coded picture as shown in figs. 1-3, page 1,

paragraphs 0010-0011 and 0016, page 2, paragraph 0021), the first indication indicating

whether or not at least a part of at least one picture is encoded with reference to a

picture preceding the intra coded picture in encoding order (i.e., the arrows as shown in

fig. 1, indicates picture encoding with reference to another picture e.g., picture preceding the intra coded picture, in encoding order, page 2, paragraph 0021), the at least one picture having an encoding order succeeding the intra coded picture (i.e., figs. 1-3, shows one picture having an encoding order succeeding the intra coded picture, e.g., P/B picture shown in figs. 1-3, consider as one picture succeeding the intra coded picture, page 2, paragraphs 0018 and 0021), and performing prediction by the video encoder for a second picture with reference to the at least one picture (i.e., page 1, paragraphs 0004-0010 and 0039-0043, picture P, predictive coded picture constitute a second type of picture which are predicted by motion compensation (MPEG-2) based on the preceding and/or possibly subsequent picture).

Although Sullivan discloses, picture P, predictive coded picture constitute a second type of picture (i.e., page 1, paragraphs 0005-0010 and 0039-0043). Sullivan is silent in regards to explicit of, performing motion compensated prediction, as specifies in the claim.

However, such limitations using/performing motion compensated prediction with reference to the at least one picture are notoriously well known in MPEG video encoding/decoding, as evidenced by Tranchard (i.e., col. 3, lines 25-35 and cols. 7-8, lines 66-32).

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement such teachings to improve the coding method by modifying the video bit-rate and switch the bit-rate without any interruption, as suggested by Tranchard (i.e., col. 2, lines 20-30).

Regarding claims 9-10, the limitations claimed are substantially similar to claim 15 above; therefore the ground for rejecting claim 15 also applies here.

Regarding claim 11, the combination of Sullivan and Tranchard teaches, indication is provided in network abstraction layer unit-type syntax (Sullivan; page 3, paragraph 0038).

Regarding claim 12, the combination of Sullivan and Tranchard teaches, wherein the indication is retrieved from a picture header (Tranchard; col. 8, lines 35–37 and lines 49-51).

Regarding claim 13, the combination of Sullivan and Tranchard teaches, wherein the indication is retrieved from a slice header (Tranchard; col. 8, lines 47-52).

Regarding claim 14, the combination of Sullivan and Tranchard teaches, random access point using a sub-sequence identifier (Sullivan; figs. 5 and 8).

Regarding claim 16, the combination of Sullivan and Tranchard teaches, a method according to claim 15, wherein the first indication is provided in NAL "network abstraction layer" unit-type syntax (Sullivan; page 3, paragraph 0038).

Regarding claim 17, the combination of Sullivan and Tranchard teaches, a method according to claim 15, wherein the first indication is provided in a picture header (Tranchard; col. 8, lines 35–37 and lines 49-51, indicating header indicating picture type and additional information).

Regarding claim 18, the combination of Sullivan and Tranchard teaches, a method according to claim 15, wherein the first indication is provided in a slice header (Tranchard; col. 8, lines 47-52, indication is provided in a slice header).

Regarding claim 19, the combination of Sullivan and Tranchard teaches, random access point (Sullivan; fig. 5, indication of random access).

Regarding claim 23, Sullivan is silent in regards to explicit of, wherein the indication is retrieved from a picture header.

Tranchard (i.e., col. 8, lines 35–37 and lines 49-51) teaches wherein the indication is retrieved from a picture header.

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement such teaching, in order to improve the coding method, as suggested by Tranchard (i.e., col. 2, lines 20-30).

Regarding claim 24, the combination of Sullivan and Tranchard teaches, wherein the indication is retrieved from a slice header (Tranchard; col. 8, lines 47-52).

Regarding claims 26 and 32, the limitations claimed are substantially similar to claim 15 and are the decoding process of the encoded bit-stream, therefore the ground for rejecting claim 15 also applies here. As for the decoding process (please see Sullivan; page 2, paragraphs 0021, 0025 and page 3, paragraphs 0041-0042).

Regarding claims 27-28 and 33, the combination of Sullivan and Tranchard teaches, discarding and continuing the decoding process (Sullivan; fig. 7, best efforts decoding and assured decoding, page 6, paragraphs 0077-0080), and NAL unit type syntax (Sullivan, page 3, paragraph 0038).

Regarding claim 31, the combination of Sullivan and Tranchard teaches, random access location is determined by examining sub-sequence identifiers for encoded pictures (Sullivan; figs. 5 and 8).

Regarding claims 29-30, the limitations claimed have been addressed in claims

12-13 above.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 20-22 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by

Sullivan (US 2003/0156640).

Regarding claim 20, Sullivan discloses, a method of decoding an encoded bit-

stream comprising, retrieving by a video decoder from the encoded bit-stream a first

indication corresponding to an intra-coded picture (i.e., figs. 1-3 and 7, page 1,

paragraph 0011, page 2, paragraph 0021 and page 6, paragraphs 0083-0084), the first

indication indicating that all decoded coded pictures at and subsequent to the intra-

coded picture can be correctly decoded when a decoding process is started from the

intra-coded picture (i.e., fig. 7, page 2, paragraph 0021, page 6, paragraphs 0078-0080)

and based on the decoded first indication decoding the encoded bit-stream, the

decoding starting from the intra coded picture and subsequent pictures in display order

(i.e., page 2, paragraphs 0021, 0025 and page 3, paragraphs 0041-0042).

Regarding claim 21, Sullivan discloses, discarding and continuing the decoding

process (Sullivan; fig. 7, best efforts decoding and assured decoding, page 6,

paragraphs 0077-0080).

Regarding claim 22, the combination of applicant admitted prior art and Sullivan

teaches, a method according to claim 20, wherein the indication is retrieved from

network abstraction layer unit-type syntax (Sullivan, page 3, paragraph 0038).

Regarding claim 25, Sullivan discloses, a method according to claim 20, wherein

a random access location is determined by examining sub-sequence identifiers for

encoded pictures (Sullivan; figs. 5 and 8).

Response to Remarks:

Applicant (remarks; pages 9-10) mainly asserts that Sullivan fails to teach or

suggest the various features that are recited in claim 15, in particular "a first indication

......" and "performing motion compensated prediction ......" as recited in the claimed.

With respect to applicant's argument; examiner indicates that, Sullivan teaches

(i.e., the arrows as shown in fig. 1, indicates picture encoding with reference to another

picture e.g., picture preceding the intra coded picture, in encoding order, page 2,

paragraph 0021) thus covers the claimed limitation "the first indication indicating

whether or not at least a part of at least one picture is encoded with reference to a

picture preceding the intra coded picture in encoding order", and (i.e., figs. 1-3, shows

one picture having an encoding order succeeding the intra coded picture, e.g., P/B

picture shown in figs. 1-3, consider as one picture succeeding the intra coded picture,

page 2, paragraphs 0018 and 0021) thus covers the claimed limitation "the at least one

picture having an encoding order succeeding the intra coded picture", Sullivan also

teaches performing prediction by the video encoder for a second picture with reference

to the at least one picture (i.e., page 1, paragraphs 0004-0010 and 0039-0043, picture

P, predictive coded picture constitute a second type of picture which are predicted by

motion compensation (MPEG-2) based on the preceding and/or possibly subsequent

picture), thus covers the limitations as claimed. As for the "performing motion

compensated prediction step", examiner relied on Tranchard (i.e., col. 3, lines 25-35

and cols. 7-8, lines 66-32) thus clearly teaches the motion compensated prediction

steps, as claimed.

Applicant (remarks; page 11) mainly argues that Sullivan fails to recites features

as recited in claim 20.

With respect to applicant's argument; examiner indicates that, Sullivan discloses

mechanisms that assist decoding process by retrieving indicator (provided by the video

encoder) from the encoded bit-stream, to correctly start the decoding process, as

discussed in page 2, paragraph 0021 and also the best effort decoding and assured

decoding process, discussed in page 6, paragraphs 0077-0083, thus meets the

limitations "retrieving by a video decoder from the encoded bit-stream a first indication

corresponding to an intra-coded picture ....., as claimed.

Contact

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Behrooz Senfi whose telephone number is 571-272-

7339. The examiner can normally be reached on M-F 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Behrooz Senfi/
Primary Examiner
Art Unit 2621